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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,409	01/30/2002	Nobutsune Kobayashi	00862.022500	4731

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EXAMINER

MCCLLOUD, RENATA D

ART UNIT PAPER NUMBER

2837

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/058,409

Applicant(s)

KOBAYASHI ET AL.

Examiner

Renata McCloud

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1 Figures 4, and 6A-6C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Kazuya (JP 2000-188894).

#### ***Kazuya teaches:***

**Claim 1:** A DC motor control method comprising: a step of discontinuously reducing a velocity command value to the motor upon deceleration of a motor (Pg. 2:0011).

**Claim 2:** when a mechanism arrives at a predetermined position, the velocity command value to the motor is discontinuously reduced (Pg. 2:0011).

**Claim 3:** the velocity command value represents a curve profile in a period before the

mechanism arrives at the predetermined position and the velocity command value is a constant value in a period after said mechanism arrives at the predetermined position (Fig. 1: at approximately 0.06sec the velocity is constant at 600mm/sec).

**Claim 4:** the curve profile is expressed by a cubic function (Fig. 1; Pg. 6, 0051).

**Claim 5:** A program product including: program code for realizing a process for discontinuously reducing a velocity command value to said motor upon deceleration of said motor (Pg. 6:0048, MPU).

**Claim 6:** A storage medium storing: program code for realizing a process for discontinuously reducing a velocity command value to said motor upon deceleration of said motor (Pg. 6:0048, ROM).

**Claims 7 and 11:** A DC motor control apparatus comprising: first velocity command value generation means for generating a velocity command value to said motor in accordance with a first function (Pg. 1:0007); second velocity command value generation means for generating a velocity command value to said motor in accordance with a second function less than a minimum value of the velocity command value generated by said first velocity command value generation means (Pg. 1: 0006); and change means for changing the velocity command value to the motor generated by the first velocity command value generation means to the velocity command value generated by the second velocity command value generation means, at predetermined timing (Pg. 1:0008).

**Claim 8:** the change means changes the velocity command value to the motor when the mechanism arrives at a predetermined position (Pg. 1:0008).

**Claim 9:** a curve profile is represented by the first function, and a constant value is outputted in accordance with the second function (Fig. 1).

**Claim 10:** the first function is a cubic function (Fig. 1; Pg. 6, 0051).

4. Claims 1-3, 12-14, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Quiogue et al (U.S. Patent 3,986, 091).

***Quiogue et al teach:***

**Claim 1:** A DC motor control method comprising: a step of discontinuously reducing a velocity command value to the motor upon deceleration of a motor (Fig. 16).

**Claim 2:** when a mechanism arrives at a predetermined position, the velocity command value to the motor is discontinuously reduced (Fig. 16:957).

**Claim 3:** the velocity command value represents a curve profile in a period before the mechanism arrives at the predetermined position (Fig. 16:953) and the velocity command value is a constant value in a period after said mechanism arrives at the predetermined position (Fig. 16:965).

**Claim 12:** A DC motor control method in a device which drives a mechanism by using a DC motor as a power source (Fig. 3), wherein a velocity command value to said motor is generated in accordance with a profile where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (e.g. Fig. 16: area at 957 is higher than area at 961).

**Claim 13:** the profile, time for low-speed drive is long in the last half of said deceleration area (Fig. 16:965).

**Claims 14 and 20:** the profile is represented by a continuous curve (Fig. 16).

**Claim 18:** A DC motor control apparatus comprising: velocity command value generation means for generating a velocity command value to a motor in accordance with a profile where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (e.g. Fig. 16: area at 957 is higher than area at 961).

**Claim 19:** the profile, time for low-speed drive is long in the last half of said deceleration area (Fig. 16: 965).

5. Claims 1, 2, 5, 6, 16-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Swanson et al (U.S. Patent 4,469,993).

***Swanson et al teach:***

**Claim 1:** A DC motor control method comprising: a step of discontinuously reducing a velocity command value to the motor upon deceleration of a motor (Fig. 9).

**Claim 2:** when a mechanism arrives at a predetermined position, the velocity command value to the motor is discontinuously reduced (Fig. 9: Vmax).

**Claim 5:** A program product including: program code for realizing a process for discontinuously reducing a velocity command value to said motor upon deceleration of said motor (Fig. 7:350; Col. 3:32-40).

**Claim 6:** A storage medium storing: program code for realizing a process for discontinuously reducing a velocity command value to said motor upon deceleration of said motor (Fig. 5:240, Col. 7:5-9).

**Claim 16:** A program product (Fig. 7:350) including: program code corresponding to a process for generating a velocity command value to said motor in accordance with a profile (Col. 3:17-31) where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (Fig. 8:Deceleration at 5000 is higher than at 9000).

**Claim 17:** A storage medium storing: program code corresponding to a process for generating a velocity command value to a motor in accordance with a profile (Fig. 5:240, Col. 7:5-9) where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (Fig. 8:Deceleration at 5000 is higher than at 9000).

**Claim 18:** A DC motor control apparatus comprising: velocity command value generation means for generating a velocity command value to a motor in accordance with a profile (Col. 3:17-31) where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (Fig. 8:Deceleration at 5000 is higher than at 9000).

**Claim 19:** the profile, time for low-speed drive is long in the last half of said deceleration area (Fig. 8:after 5000).

**Claim 22:** An electronic device comprising: velocity command value generation means for generating a velocity command value to said motor in accordance with a profile (Fig. 5:240, Col. 7:5-9) where a deceleration velocity in a first half of a deceleration area is higher than that in a last half of the deceleration area (Fig. 8:Deceleration at 5000 is higher than at 9000).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quiogue et al as applied to claims 12 and 18 above, and further in view of Nakata et al (U.S. 5,732,195).

**Claims 15 and 21:** the profile is represented by a sextic function (Col.12:5-35, 49-60).

***Double Patenting***

8. Applicant is advised that should claim 7 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. Also should claim 18 be found allowable, claim 22 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).



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*Conclusion*


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (703) 308-1763. The examiner can normally be reached on Mon.-Thurs and every other Fri. from 8 am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Renata McCloud  
Examiner  
Art Unit 2837

RDM  
April 2, 2003

  
ROBERT E. NAPPI  
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